Data Sheet (Cat.No.T36862)

TargetMol

Ganglioside GT1b Mixture (sodium salt)

Chemical Properties

CAS No. : 59247-13-1

Formula: C95H162N5O473Na

Molecular Weight: 2195.27

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Ganglioside GT1b is a trisialoganglioside that is characterized by having two sialic residues linked to the inner galactose unit. It binds to the neurotoxins botulinum toxin serotype A (BTxA), BTxA heavy chain, and tetanus toxin with IC50 values of 11, 0.74, and 7.2 μM, respectively.[1] Ganglioside GT1b-containing liposomes bind to the major coat protein VP1 from Merkel cell polyomavirus (MCPyV), which has been identified in Merkel cell carcinomas, identifying ganglioside GT1b as a putative MCPyV receptor. [2] Ganglioside GT1b decreases production of IL-6, IL-10, IgG, IgM, and IgA in human peripheral blood mononuclear cells (PBMCs) by 31.4, 30.5, 60, 59.5, and 58%, respectively, when used at a concentration of 10 μM [3] . Ganglioside GT1b mixture contains ganglioside GT1b molecular species with C18:1 and C20:1 sphingoid backbones.
Targets(IC50)	Others

Solubility Information

Solubility	Chloroform:Methanol (2:1): Soluble (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.4555 mL	2.2776 mL	4.5552 mL
5 mM	0.0911 mL	0.4555 mL	0.911 mL
10 mM	0.0456 mL	0.2278 mL	0.4555 mL
50 mM	0.0091 mL	0.0456 mL	0.0911 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Schengrund, C.-L., DasGupta, B.R., and Ringler, N.J. Binding of botulinum and tetanus neurotoxins to ganglioside GT1b and derivatives thereof. J. Neurochem. 57(3), 1024-1032 (1991).
Erickson, K.D., Garcea, R.L., and Tsai, B. Ganglioside GT1b is a putative host cell receptor for the Merkel cell polyomavirus. J. Virol. 83(19), 10275-10279 (2009).
Kanda, N., and Tamaki, K. Ganglioside GT1b suppresses immunoglobulin production by human peripheral blood mononuclear cells. Immunology 96(4), 628-633 (1999).